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(FILE 'HOME' ENTERED AT 15:45:38 ON 25 SEP 2007)

FILE 'HCAPLUS' ENTERED AT 15:45:44 ON 25 SEP 2007
E EP1256351/PN 25

L1 1 S E3

FILE 'STNGUIDE' ENTERED AT 15:46:11 ON 25 SEP 2007

FILE 'HCAPLUS' ENTERED AT 15:46:48 ON 25 SEP 2007
E US20030180901/PN 25

L2 1 S E3

FILE 'STNGUIDE' ENTERED AT 15:47:21 ON 25 SEP 2007

FILE 'HCAPLUS' ENTERED AT 15:52:58 ON 25 SEP 2007
E EP1256351/PN 25

L3 1 S E3

E MATSUNAGA K/AU 25

L4 446 S (E3 OR E63)

E EBINA TAKUSABURO/AU 25

L5 102 S (E3)

L6 547 S L4 OR L5

L7 27 S L6 AND TRICHOLOMA

L8 26 S L7 NOT (L2 OR L3)

L9 9 S L6 AND FERM

L10 7 S L8 AND L9

L11 28 S L8 OR L9

L11 ANSWER 1 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:1044757 HCAPLUS
TITLE: Development of an Enzyme-Linked Immunosorbent Assay To
Detect an Immunomodulatory α -D-Glucan-Protein
Complex, MPG-1, in Basidiomycete Tricholoma
matsutake and Related Processed Foods
AUTHOR(S): Hoshi, Hirotaka; Yagi, Yoko; Matsunaga,
Kenichi; Ishihara, Yoko; Yasuhara, Tadashi
CORPORATE SOURCE: Biomedical Research Laboratories, Kureha Corporation,
3-26-2 Hyakunin-cho, Shinjyuku-ku, Tokyo, 169-8503,
Japan
SOURCE: Journal of Agricultural and Food Chemistry ACS ASAP
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We previously isolated a novel immunomodulatory α -(1,4)(1,6)(1,2)-D-glucan-protein complex (MPG-1) from mycelia of Tricholoma matsutake in basidiomycetes. In the present study, we raised a polyclonal antibody by immunizing rabbits with MPG-1 and constructed a sandwich ELISA (ELISA) system to examine the distribution of MPG-1 among edible mushrooms and related processed foods. The system detected MPG-1 quant. at concns. of more than 10 ng/mL, with a coefficient of variation of less than 10% by intra-assay and interassay precision. Anal. with the system of chemical modified MPG-1 suggested that the sugar moiety was mainly involved in the detection. The system detected MPG-1 in the exts. of the fruiting bodies of T. Matsutake but not in those of 34 other basidiomycete species. Moreover, a significant amount of MPG-1 was detected in the exts. of their cultured mycelia. The antigenic structure of MPG-1 was relatively stable in terms of pH and temperature MPG-1 was detected in processed foods supplemented with T. matsutake. These results suggest that MPG-1 is distributed predominantly in T. Matsutake species and that the ELISA system can detect it in processed foods supplemented with T. matsutake.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:759422 HCAPLUS
TITLE: The rheumatoid-arthritis prevention and therapy agent
and foods and beverages containing the object for
rheumatoid-arthritis prophylaxis or the compositions
for the therapy, and those compositions [machine
translation]
INVENTOR(S): Matsunaga, Kenichi
PATENT ASSIGNEE(S): Kureha Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 2007176823 | A | 20070712 | JP 2005-374968 | 20051227 |
| PRIORITY APPLN. INFO.: | | | JP 2005-374968 | 20051227 |

AB [Machine Translation of Descriptors]. Provide the novel object for rheumatoid-arthritis prophylaxis, or the composition for the therapy. The composition for rheumatoid-arthritis prevention and therapies which contains the component derived from basidiomycete Tricholoma matsutake (scientific name "Tricholoma matsutake") at least is provided. This composition has the arthritis onset inhibitory action, the anti-collagen antibody-production inhibitory

action, the IL-6 production inhibitory action, the blood serum C-reactive protein (CRP) elevation inhibitory action, the blood serum lactate dehydrogenase /LDH (LDH) elevation inhibitory action, and the blood serum rheumatoid factor (RF) elevation inhibitory action.

L11 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:727547 HCAPLUS
 TITLE: The composition, the foods and beverages, drugs, and their use containing the extraction component derived from two or more mushrooms [machine translation]
 INVENTOR(S): Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Kureha Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 18pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 2007169227 | A | 20070705 | JP 2005-370986 | 20051222 |
| PRIORITY APPLN. INFO.: | | | JP 2005-370986 | 20051222 |

AB [Machine Translation of Descriptors]. Provide the composition which contained the extraction component derived from two or more mushrooms as a useful composition in promotion of the immune function in the living body. As the component extracted from the thing of the Tricholoma -matsutake mycelium origin which is the mushrooms, and a component which are the mushrooms and was extracted from the thing of the basidiomycetes origin, (1) Provide the component extracted from the thing of the Agaricus blazei origin, the component extracted from the thing of (2) maitake (Grifola frondosa) origin, the composition containing these (1) and/or (2), etc.

L11 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:726451 HCAPLUS
 DOCUMENT NUMBER: 147:141423
 TITLE: Anti-MPG-1 antibody and immunoassay kit for quantitating Tricholoma matsutake-derived α -glucan-protein complexes in beverage or food and in pharmaceuticals
 INVENTOR(S): Matsunaga, Kenichi; Hoshi, Hirotaka
 PATENT ASSIGNEE(S): Kureha Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 25pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 2007169207 | A | 20070705 | JP 2005-367899 | 20051221 |
| PRIORITY APPLN. INFO.: | | | JP 2005-367899 | 20051221 |

AB Provided are antibodies specific to α -glucan-protein complexes or MPG-1 and immunoassay kit for quantitating the Tricholoma matsutake component in foods or beverages, and in drugs or medical and pharmaceutical products. The immunoassay is e.g. an ELISA comprising solid phase-immobilized antibody, enzyme-labeled antibody and chromogenic substrate for the enzyme.

L11 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1090407 HCAPLUS

DOCUMENT NUMBER: 145:389378
 TITLE: Tricholoma matsutake and its exts. as IgE inhibitors and health foods for prevention and treatment of allergic diseases
 INVENTOR(S): Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Kureha Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 14pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 2006282635 | A | 20061019 | JP 2005-107790 | 20050404 |
| PRIORITY APPLN. INFO.: | | | JP 2005-107790 | 20050404 |

AB Tricholoma matsutake and its exts. are claimed as IgE inhibitors and health foods for prevention and treatment of allergic diseases.

L11 ANSWER 6 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1090404 HCAPLUS
 DOCUMENT NUMBER: 145:389377
 TITLE: Tricholoma matsutake and its exts. for prevention and treatment of systemic inflammatory response syndrome
 INVENTOR(S): Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Kureha Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 12pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 2006282634 | A | 20061019 | JP 2005-107789 | 20050404 |
| PRIORITY APPLN. INFO.: | | | JP 2005-107789 | 20050404 |

AB Tricholoma matsutake and its exts. are claimed as drugs and health foods for prevention and treatment of systemic inflammatory response syndrome, especially septicemia.

L11 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:910700 HCAPLUS
 DOCUMENT NUMBER: 145:263282
 TITLE: Cancer-preventive agents and food containing matsutake (extracts) or lactoferrin
 INVENTOR(S): Kobayashi, Hiroshi; Iijima, Hiroko; Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Kureha Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 13pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 2006232719 | A | 20060907 | JP 2005-48879 | 20050224 |
| PRIORITY APPLN. INFO.: | | | JP 2005-48879 | 20050224 |

AB The agents and food for newborns, contain matsutake (Tricholoma

matsutake), its exts., or lactoferrin. Newborn rats were administered with a fraction (obtained from water extract of matsutake FERM BP-7304) at 100 mg/kg p.o., then injected with azoxymethane at 15 mg/kg once a wk for 3 times from 8 wk after birth, and sacrificed 5 wk after the last injection. The number of aberrant crypt foci (ACF) formed in the rats was 109, while that in controls administered with a physiol. saline solution instead of the matsutake extract fraction was 196.

L11 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1133111 HCAPLUS
 DOCUMENT NUMBER: 144:50265
 TITLE: Isolation and Characterization of a Novel Immunomodulatory α -Glucan-Protein Complex from the Mycelium of *Tricholoma matsutake* in Basidiomycetes
 AUTHOR(S): Hoshi, Hiroataka; Yagi, Yoko; Iijima, Hiroko; Matsunaga, Kenichi; Ishihara, Yoko; Yasuhara, Tadashi
 CORPORATE SOURCE: Biomedical Research Laboratories, Kureha Chemical Industry Co. Ltd., Tokyo, 169-8503, Japan
 SOURCE: Journal of Agricultural and Food Chemistry (2005), 53(23), 8948-8956
 CODEN: JAFCAU; ISSN: 0021-8561
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB T. matsutake, a high-class edible mushroom in Japan, has been reported to have excellent biol. activities, but difficulty in cultivating the fruit bodies and limited bulk availability have restricted detailed studies. A method of culturing in tanks, enabling the bulk supply of the mycelia was developed. The preparation (CM6271) exerts modulative effects on the immune competence of mice and rats. In this study, a sodium hydroxide extract of CM6271 was defatted followed by fractionation with a combination of ion exchange chromatog. and gel filtration to identify the components involved in the expression of the activity, and a single peak fraction (MPG-1) was obtained with reversed phase chromatog. MPG-1 was a glycoprotein (sugar:protein ratio, 94.3:5.7) with a relative mol. mass of 360 kDa, and the sugar moiety contained about 90% glucose. NMR spectra and methylation anal. revealed that the α -1,4-linkage was the predominant glucan linkage with α -1,6- and α -1,2-linkages in the minority. The amino acid composition in the protein moiety was rich in glutamine, alanine, asparagine, leucine, glycine, valine, serine, threonine, isoleucine, and proline. MPG-1 was resistant to degradation with amylase or protease. The oral administration of MPG-1 promoted, in a dose-dependent manner, the recovery of the mouse natural killer cell activity and serum IL-12 level that had been reduced by the loading of restraint stress. The dose of MPG-1 (25 mg/kg) required for the expression of the effect decreases to 1/12 of that of CM6271 (300 mg/kg). Furthermore, MPG-1 formed a complex with TGF- β 1 in vitro, modulating the biol. activity of TGF- β 1 by binding to its active form. These results indicate that the mycelium of T. matsutake contains a novel α -glucan-protein complex with immunomodulatory activities.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:823428 HCAPLUS
 TITLE: Antidiabetic agent and food
 INVENTOR(S): Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Japan
 SOURCE: U.S. Pat. Appl. Publ.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent

LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| US 2005180990 | A1 | 20050818 | US 2004-915419 | 20040811 |
| JP 2005225801 | A | 20050825 | JP 2004-35825 | 20040212 |
| PRIORITY APPLN. INFO.: | | | JP 2004-35825 | A 20040212 |

AB An antidiabetic agent and food are disclosed, which contain <i>Tricholoma matsutake</i>, in particular <i>Tricholoma matsutake</i> of the FERM BP-7304 strain, and any of mycelia, broths, or fruit bodies (including spores) thereof, as they are, dried products thereof, or extracts thereof (e.g., a hot water extract or an alkaline solution extract). Methods of treating diabetes by the use of the antidiabetic agent and food are also disclosed.

L11 ANSWER 10 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:814124 HCAPLUS
 TITLE: Hypotensive agent and food
 INVENTOR(S): Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Japan
 SOURCE: U.S. Pat. Appl. Publ.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| US 2005180991 | A1 | 20050818 | US 2004-915420 | 20040811 |
| JP 2005225803 | A | 20050825 | JP 2004-35827 | 20040212 |
| PRIORITY APPLN. INFO.: | | | JP 2004-35827 | A 20040212 |

AB A hypotensive agent and food are disclosed, which contain <i>Tricholoma matsutake</i>, in particular <i>Tricholoma matsutake</i> of the FERM BP-7304 strain, and any of mycelia, broths, or fruit bodies (including spores) thereof, as they are, dried products thereof, or extracts thereof (e.g., a hot water extract or an alkaline solution extract). Methods of treating hypertension by the use of the hypotensive agent and food are also disclosed.

L11 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:814123 HCAPLUS
 TITLE: Antihyperlipidemic agent and food
 INVENTOR(S): Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Japan
 SOURCE: U.S. Pat. Appl. Publ.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| US 2005180989 | A1 | 20050818 | US 2004-915402 | 20040811 |
| JP 2005225802 | A | 20050825 | JP 2004-35826 | 20040212 |
| PRIORITY APPLN. INFO.: | | | JP 2004-35826 | A 20040212 |

AB An antihyperlipidemic agent and food are disclosed, which contain <i>Tricholoma matsutake</i>, in particular <i>Tricholoma matsutake</i> of the FERM BP-7304 strain, and any of mycelia, broths, or fruit bodies (including spores) thereof, as they are, dried

products thereof, or extracts thereof (e.g., a hot water extract or an alkaline solution extract). Methods of treating hyperlipemia by the use of the antihyperlipidemic agent and food are also disclosed.

L11 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:545530 HCAPLUS

DOCUMENT NUMBER: 143:20088

TITLE: Matsutake organic solvent extracts containing linoleic acid and oleic acid and their salts and prodrugs for treatment of TGF- β -related diseases

INVENTOR(S): Matsunaga, Kenichi; Hoshi, Hirotaka

PATENT ASSIGNEE(S): Kureha Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| JP 2005162668 | A | 20050623 | JP 2003-403374 | 20031202 |
| PRIORITY APPLN. INFO.: | | | JP 2003-403374 | 20031202 |
| AB Matsutake organic solvent exts. containing linoleic acid and oleic acid and their salts and prodrugs, including some hydrophobic polymers, are claimed as drugs and health foods for treatment of TGF- β -related diseases, including fibrosis, chronic fatigue, cancer, metastasis cancer, liver disease, heart disease, hypertension, and chronic pancreatitis. | | | | |

L11 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:347047 HCAPLUS

DOCUMENT NUMBER: 142:397662

TITLE: Novel glycoprotein and medicinal composition containing the same

INVENTOR(S): Matsunaga, Kenichi; Hoshi, Hirotaka

PATENT ASSIGNEE(S): Kureha Chemical Industry Co., Ltd., Japan

SOURCE: PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2005035571 | A1 | 20050421 | WO 2004-JP15057 | 20041013 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1686136 | A1 | 20060802 | EP 2004-817163 | 20041013 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | | |
| US 2007066515 | A1 | 20070322 | US 2006-575491 | 20060412 |
| PRIORITY APPLN. INFO.: | | | | |
| | | | JP 2003-353419 | A 20031014 |
| | | | WO 2004-JP15057 | W 20041013 |

AB Disclosed is a novel glycoprotein having (a) a mol. weight of about 60 kDa; and (b) a ratio of carbohydrate content to protein content (carbohydrate:protein) of 16.4:1.0. This glycoprotein can be prepared by: (1) extracting Tricholoma matsutake with an alkali solution or hot water; (2) adsorbing the obtained extract by an anion exchange resin; (3) eluting the adsorbed fraction from the anion exchange resin with an eluent; and (4) obtaining a fraction having a mol. weight of 50 to 70 kDa by gel filtration. The above glycoprotein is useful as the active ingredient of immunopotentiators, agents for promoting recovery from loaded stress or antitumor agents. Dried Tricholoma matsutake FERM BP-7304 was extracted with 0.2 M NaOH solution followed by anion exchange chromatog. by using Toyopearl PAK 650 column, gel filtration by using Sephacryl S-100 and Sephacryl S-500 columns, and C18 reverse-phase chromatog. with Intersil EP300 to obtain a glycoprotein fraction of the present invention. The effects of the obtained fractions on NK cell activity in stressed mice and TGF- β 1 binding activity in vitro were examined

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:533643 HCAPLUS
 DOCUMENT NUMBER: 141:70620
 TITLE: Tricholoma extract as an infection preventive or therapeutic agent and food containing it.
 INVENTOR(S): Suzuki, Tatsuo; Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Japan
 SOURCE: U.S. Pat. Appl. Publ., 26 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| US 2004126393 | A1 | 20040701 | US 2003-695766 | 20031030 |
| JP 2004210694 | A | 20040729 | JP 2002-381274 | 20021227 |
| CA 2447378 | A1 | 20040627 | CA 2003-2447378 | 20031030 |
| PRIORITY APPLN. INFO.: | | | JP 2002-381274 | A 20021227 |

AB An infection preventive or therapeutic agent and food are disclosed, which contain as an active ingredient an anion exchange resin adsorption fraction of a mixture obtained by mixing a hot water extract of mycelia of Basidiomycetes belonging to the genus Tricholoma, in particular the Tricholoma matsutake FERM BP-7304 strain, with an alkaline solution extract of the mycelia residue from the mycelia hot water extract. The anion exchange resin adsorption fraction has a carbohydrate content of 60-72% in glucose equivalent, determined by a phenol-sulfuric acid method and a protein content of 28-40% in albumin equivalent, determined by a copper-Folin method. Methods of preventing or treating infection(s) with a pathogenic microorganism by the use of the preventive or therapeutic agent and food are also disclosed.

L11 ANSWER 15 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:528041 HCAPLUS
 TITLE: Cancer preventive agent and food
 INVENTOR(S): Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Japan
 SOURCE: U.S. Pat. Appl. Publ.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|------------|
| US 2004126392 | A1 | 20040701 | US 2003-695762 | 20031030 |
| JP 2004210695 | A | 20040729 | JP 2002-381275 | 20021227 |
| CA 2447352 | A1 | 20040627 | CA 2003-2447352 | 20031030 |
| | | | JP 2002-381275 | A 20021227 |

PRIORITY APPLN. INFO.:

AB A cancer preventive agent and food are disclosed, which contain Tricholoma matsutake, in particular Tricholoma matsutake of the FERM BP-7304 strain, and any of mycelia, broths, or fruit bodies (including spores) thereof, as they are, dried products thereof, or extracts thereof (e.g., a hot water extract or an alkaline solution extract). Methods of preventing a cancer by the use of the cancer preventive agent and food are also disclosed.

L11 ANSWER 16 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:962589 HCAPLUS
 DOCUMENT NUMBER: 140:296999
 TITLE: Activation of antitumor immunity by intratumor injection of biological preparations
 AUTHOR(S): Ebina, Takusaburo
 CORPORATE SOURCE: Division of Immunology, Miyagi Cancer Center Research Institute, Japan
 SOURCE: Gan to Kagaku Ryoho (2003), 30(11), 1555-1558
 CODEN: GTKRDX; ISSN: 0385-0684
 PUBLISHER: Gan to Kagaku Ryohosha
 DOCUMENT TYPE: Journal
 LANGUAGE: Japanese

AB The antitumor effects of biol. response modifiers (BRMs) in an exptl. mouse model using a double grafted tumor system were analyzed. Some BRMs prevented metastases by utilizing the anti-tumor immunol. cascade reactions, which activate macrophages in the body. The following BRMs were analyzed: PSK was a hot water extract of cultured mycelia from Coliulus versicolor and a protein bound β -glucan. Lentinan was purified from fruit bodies of Lentinus edodes and is a β -glucan. The agaricus preparation was extracted from fruit bodies of Agaricus blazei and a protein-bound α -, β -glucan. The M2 fraction was extracted from mycelia of Tricholoma matsutake and was a protein bound α -glucan. M1 fraction was purified from mycelia of T. matsutake and was an α -glucan. PSK cured both primary and metastatic tumors in the double grafted tumor system. Lentinan did not inhibit the growth of either primary or metastatic tumors. Agaricus preparation cured a primary tumor and inhibited the growth of a metastatic tumor. The M2 fraction prepared from Matsutake inhibited the growth of both primary and metastatic tumors. The M1 fraction did not inhibit either primary or metastatic tumors. Immunosuppressive acidic protein (IAP) is produced by activated macrophages. The PSK, Agaricus preparation and M2 fraction of the Matsutake preparation induced IAP but the lentinan and M1 fraction did not.

L11 ANSWER 17 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:826559 HCAPLUS
 DOCUMENT NUMBER: 140:234499
 TITLE: Mass production of mushroom, Matsutake (Tricholoma matsutake), mycelia and its application to functional food
 AUTHOR(S): Matsunaga, Kenichi; Chiba, Tadahiko; Takahashi, Eisaku
 CORPORATE SOURCE: Bio-Medical Lab., Kureha Kagaku Kogyo K. K., Japan
 SOURCE: Bio Industry (2003), 20(9), 37-45
 CODEN: BIINEG; ISSN: 0910-6545
 PUBLISHER: Shi Emu Shi Shuppan

DOCUMENT TYPE: Journal; General Review
 LANGUAGE: Japanese
 AB A review on the research conducted by the Goha Chemical Industry, Japan, and the results applied to production of health food.

L11 ANSWER 18 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2003:808895 HCAPLUS
 DOCUMENT NUMBER: 140:174724
 TITLE: Inhibition of Decrease in Natural Killer Cell Activity in Repeatedly Restraint-Stressed Mice by a Biological Response Modifier Derived from Cultured Mycelia of the Basidiomycete Tricholoma matsutake
 AUTHOR(S): Ishihara, Yoko; Iijima, Hiroko; Yagi, Yoko; Hoshi, Hiroataka; Matsunaga, Kenichi
 CORPORATE SOURCE: School of Medicine, Department of Hygiene and Public Health (I), Tokyo Woman's Medical University, Tokyo, Japan
 SOURCE: NeuroImmunoModulation (2003), Volume Date 2003-2004, 11(1), 41-48
 CODEN: NROIEM; ISSN: 1021-7401
 PUBLISHER: S. Karger AG
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Objective: To develop a method to cope with stress-induced reduction in immunocompetence, we evaluated the immunomodulatory activities of a biol. response modifier derived from the mycelia of the basidiomycete Tricholoma matsutake (CM6271) in mice under repeated restraint stress. Methods: C57BL/6 mice were inserted, one per tube, into 50-mL polypropylene tubes into which more than 30 ventilation holes had been drilled, and were restrained everyday for 20 days in this fashion for set periods of time. Natural killer (NK) cell activity and NK1.1-pos. cell counts in the spleen, ACTH and corticosterone levels in the blood were determined CM6271 was orally administered daily during the restraint stress period. Results: (1) When the mice were restrained in a confined space for 6 h per day for 20 days, the NK cell activity and the NK1.1-pos. cell counts in the spleen significantly decreased after day 5 with an increase in the blood ACTH and corticosterone levels. (2) Oral administration of CM6271 during the restraint stress period significantly prevented the stress-induced decrease in NK cell activity. The effect was dependent on the timing, duration, and doses administered. (3) CM6271 did not significantly affect the splenic NK1.1-pos. cell counts or the levels of blood ACTH and corticosterone in restraint-stressed mice. Conclusion: The above findings suggest that CM6271 inhibits the restraint stress-induced decrease of NK cell activity in a timing of administration and dose-dependent manner.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 19 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2003:678679 HCAPLUS
 DOCUMENT NUMBER: 139:207777
 TITLE: Anion exchange resin adsorbed fraction, immunopotentiator, and promoter for recovery from loaded stress originating in matsutake mushroom
 INVENTOR(S): Ebina, Takusaburo; Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Kureha Chemical Industry Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 63 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2003070264 | A1 | 20030828 | WO 2003-JP1979 | 20030224 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2003211434 | A1 | 20030909 | AU 2003-211434 | 20030224 |
| EP 1477179 | A1 | 20041117 | EP 2003-707010 | 20030224 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| US 2005147619 | A1 | 20050707 | US 2003-505468 | 20030224 |
| PRIORITY APPLN. INFO.: | | | | |
| | | | JP 2002-47021 | A 20020222 |
| | | | JP 2002-106632 | A 20020409 |
| | | | WO 2003-JP1979 | W 20030224 |

AB It is intended to disclose a novel anion exchange resin adsorbed fraction of a liquid mixture obtained by mixing a hot water-extract of mycelium of matsutake mushroom FERM BP-7304 strain with an alkali solution-extract of the residue of the mycelium remaining in the course of acquiring the hot water-extract. Also disclosed are an immunopotentiator and a promoter for the recovery from loaded stress each containing as an active ingredient the novel anion exchange resin adsorbed fraction originating in matsutake mushroom.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:651687 HCAPLUS

DOCUMENT NUMBER: 141:118499

TITLE: A 28-day repeated dietary dose toxicity study of preparation derived from cultured mycelia of Tricholoma matsutake BP-7304 strain (Kureha M6271). [Erratum to document cited in CA139:113000]

AUTHOR(S): Omori, Masashi; Baba, Sumiaki; Yamashita, Rie; Nakama, Kazuhiro; Kamimura, Yukihiro; Sameshima, Hidenobu; Tanaka, Hiromitsu; Iwata, Mitsuo; Matsunaga, Kenichi

CORPORATE SOURCE: Drug Safety Res. Lab., Shin Nippon Biomedical Lab., Ltd., Kagoshima, 891-1394, Japan

SOURCE: Oyo Yakuri (2003), 65(1/2), 47
CODEN: OYYAA2; ISSN: 0300-8533

PUBLISHER: Oyo Yakuri Kenkyukai

DOCUMENT TYPE: Journal

LANGUAGE: English

AB On page 85, right column, line 1, "Tansuikabutsu" (i.e., carbohydrate) should be changed to "Toushitsu" (i.e., digestible carbohydrate).

L11 ANSWER 21 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:651686 HCAPLUS

DOCUMENT NUMBER: 141:118498

TITLE: A bacterial reverse mutation test of a preparation derived from cultured mycelia of Tricholoma matsutake BP-7304 strain (Kureha M6271). [Erratum to document cited in CA140:072404]

AUTHOR(S): Torigoe, Naohiko; Ukezono, Taeko; Saigo, Kazuhiko; Omori, Masashi; Sameshima, Hidenobu; Tanaka,

Hiromitsu; Iwata, Mitsuo; Matsunaga, Kenichi
CORPORATE SOURCE: Drug Safety Res. Lab., Shin Nippon Biomedical lab.,
Ltd., Kagoshima, 891-1394, Japan
SOURCE: Oyo Yakuri (2003), 65(1/2), 47
CODEN: OYYAA2; ISSN: 0300-8533
PUBLISHER: Oyo Yakuri Kenkyukai
DOCUMENT TYPE: Journal
LANGUAGE: English
AB On page 89, left column, line 3, "Tansuikatutsu" (i.e., carbohydrate)
should be changed to "Toushitsu" (i.e., digestible carbohydrate).

L11 ANSWER 22 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:651685 HCAPLUS
DOCUMENT NUMBER: 141:48841
TITLE: An acute single oral dose toxicity study of a
preparation derived from cultured mycelia of
Tricholoma matsutake BP-7304 strain (Kureha
M6271) in rats. [Erratum to document cited in
CA139:112999]
AUTHOR(S): Yamatoya, Hideyuki; Kawazoe, Megumi; Baba, Sumiaki;
Yamashita, Rie; Kamimura, Yukihiro; Omori, Masashi;
Sameshima, Hidenobu; Tanaka, Hiromitsu; Iwata, Mitsuo;
Matsunaga, Kenichi
CORPORATE SOURCE: Drug Safety Res. Lab., Shin Nippon Biomedical Lab.,
Ltd., Kagoshima, 891-1394, Japan
SOURCE: Oyo Yakuri (2003), 65(1/2), 47
CODEN: OYYAA2; ISSN: 0300-8533
PUBLISHER: Oyo Yakuri Kenkyukai
DOCUMENT TYPE: Journal
LANGUAGE: English
AB On page 85, "carbohydrate" should read "sugar".

L11 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:539868 HCAPLUS
DOCUMENT NUMBER: 139:113000
TITLE: A 28-day repeated dietary dose toxicity study of
preparation derived from cultured mycelia of
Tricholoma matsutake BP-7304 strain (Kureha
M6271)
AUTHOR(S): Omori, Masashi; Baba, Sumiaki; Yamashita, Rie; Nakama,
Kazuhiro; Kamimura, Yukihiro; Sameshima, Hidenobu;
Tanaka, Hiromitsu; Iwata, Mitsuo; Matsunaga,
Kenichi
CORPORATE SOURCE: Drug Safety Res. Lab., Shin Nippon Biomedical Lab.,
Ltd., Kagoshima, 891-1394, Japan
SOURCE: Oyo Yakuri (2003), 64(5/6), 95-108
CODEN: OYYAA2; ISSN: 0300-8533
PUBLISHER: Oyo Yakuri Kenkyukai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB A preparation derived from cultured mycelia of Tricholoma matsutake
BP-7304 Strain (Kureha M6271, hereinafter referred to as CM6271) was
dietarily administered at 0 (control), 0.2, 1 and 5 weight/% once daily, 7
times weekly, for 28 days up to 6 male and 6 female Crj:CD(SD)IGS rats to
investigate its toxicity. Addnl., a 14-wk recovery period was set to
evaluate the reversibility of toxicity. The control group received powdered
food (CE-2), vehicle, in the same manner as the test article. The dose
levels for the 0.2 weight/% group were 206.2 mg/kg for males and 191.7 mg/kg
for females. The dose levels for the 1 weight/% group were 10122 mg/kg for
males and 1035.2 mg/kg for females. The dose levels for the 5 weight/% group
were 5249.4 mg/kg for males and 5252.5 mg/kg for females. No animals died
in any group during the dosing or recovery period. No test
article-related changes were noted in clin. signs, behavioral pharmacol.,

food consumption, body weight, ophthalmol., urinalysis, hematol., blood chemical, gross pathol., organ wts. or histopathol. It was concluded from these results that under the conditions of this study, the no-observed-adverse-effect level of CM6271 was 5 weight/% and above, and the dose level was 5,000 mg/kg and above in both males and females.

L11 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:539857 HCAPLUS

DOCUMENT NUMBER: 140:72404

TITLE: A bacterial reverse mutation test of a preparation derived from cultured mycelia of *Tricholoma matsutake* BP-7304 strain (Kureha M6271)

AUTHOR(S): Torigoe, Naohiko; Ukezono, Taeko; Saigo, Kazuhiko; Omori, Masashi; Sameshima, Hidenobu; Tanaka, Hiromitsu; Iwata, Mitsuo; Matsunaga, Kenichi

CORPORATE SOURCE: Drug Safety Res. Lab., Shin Nippon Biomedical Lab., Ltd., Kagoshima, 891-1394, Japan

SOURCE: Oyo Yakuri (2003), 64(5/6), 89-94

CODEN: OYYAA2; ISSN: 0300-8533

PUBLISHER: Oyo Yakuri Kenkyukai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB In order to evaluate whether a preparation derived from cultured mycelia of *Tricholoma matsutake* BP-7304 Strain (Kureha M6271, hereinafter referred to as CM6271) induces gene mutation, a bacterial reverse mutation test was performed with 5 strains of *Salmonella typhimurium* (TA98, TA100, TA1535, TA1537) and *Escherichia coli* (WP2uvrA), using the pre-incubation method. For the dose finding test, 7 dose levels were set at 5 to 5000 mg/plate, for both the tests with and without metabolic activation. For the main test, 6 dose levels were set at 156 to 5000 mg/plate, for both the tests with and without metabolic activation. The results show that compared with the neg. control, CM6271 did not cause a two-fold or greater increase in the number of revertant colonies in any of the 5 test strains in either the dose finding or main tests, with or without metabolic activation. Growth inhibition was not observed at up to 5000 mg/plate. Test article precipitation was observed at 15 mg/plate or greater. It was concluded from these results that under the conditions of this study, CM6271 did not induce gene mutation, with or without metabolic activation.

L11 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:539853 HCAPLUS

DOCUMENT NUMBER: 139:112999

TITLE: An acute single oral dose toxicity study of a preparation derived from cultured mycelia of *Tricholoma matsutake* BP-7304 strain (Kureha M6271) in rats

AUTHOR(S): Yamatoya, Hideyuki; Kawazoe, Megumi; Baba, Sumiaki; Yamashita, Rie; Kamimura, Yukihiro; Omori, Masashi; Sameshima, Hidenobu; Tanaka, Hiromitsu; Iwata, Mitsuo; Matsunaga, Kenichi

CORPORATE SOURCE: Drug Safety Res. Lab., Shin Nippon Biomedical Lab., Ltd., Kagoshima, 891-1394, Japan

SOURCE: Oyo Yakuri (2003), 64(5/6), 85-88

CODEN: OYYAA2; ISSN: 0300-8533

PUBLISHER: Oyo Yakuri Kenkyukai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB A preparation derived from cultured mycelia of *Tricholoma matsutake* BP-7304 strain (Kureha M6271, hereinafter referred to as CM6271) was administered orally once to CD(SD)IGS rats in order to investigate toxicity. No animals died after the 2-wk observation period. No abnormalities were observed in clin. signs. No test article-related abnormalities were observed in body weight or gross pathol. It was concluded

from these results that under the conditions of this study, the approx. LD level of CM6271 was higher than 2000 mg/kg in both females and males when administered once orally to rats.

L11 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2002:501170 HCAPLUS
 DOCUMENT NUMBER: 138:100453
 TITLE: Antitumor effect of a peptide-glucan preparation extracted from a mycelium of Tricholoma matsutake (S. Ito and Imai) Sing
 AUTHOR(S): Ebina, Takusaburo; Kubota, Tomoka; Ogama, Naoko; Matsunaga, Ken-ichi
 CORPORATE SOURCE: Division of Immunology, Miyagi Cancer Center Research Institute, Natori, Miyagi, 981-1293, Japan
 SOURCE: Biotherapy (Tokyo, Japan) (2002), 16(3), 255-259
 CODEN: BITPE9; ISSN: 0914-2223
 PUBLISHER: Gan to Kagaku Ryohosha
 DOCUMENT TYPE: Journal
 LANGUAGE: Japanese
 AB The antitumor effect of exts. obtained from the mycelium of Tricholoma matsutake (S. Ito and Imai) Sing, was examined in a double grafted tumor system, in which BALB/c mice received simultaneous intradermal injections of Meth-A tumor cells in both the right (2 x 10⁶ cells) and left (4 x 10⁵ cells) flanks, and were then injected with 5 mg of exts. of T. matsutake in the right tumor on days 3, 4 and 5. M2 fraction (a peptide-glucan preparation) of extract inhibited the growth of both the right tumor and the left, non-treated tumor. M1 fraction (a glucan preparation) of extract inhibited neither the right nor the left tumor. Immunosuppressive acidic protein (IAP) is produced by activated macrophages. IAP in serum of M2 fraction-treated mice was increased transiently soon after intradermal injection of 5 mg of extract. However, IAP induction was not observed in the serum of mice treated with M1 fraction. This suggests that macrophages may recognize a peptide-glucan preparation but not a glucan preparation. The protein content of M2 fraction was 38% and NMR anal. showed that the glycoside portion of M2 fraction was mainly α -glucan (71%).

L11 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2002:288338 HCAPLUS
 TITLE: Medicinal compositions for promoting recovery from stress loading and novel matsutake mushroom strain
 INVENTOR(S): Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Kureha Chemical Industry Co., Ltd., Japan
 SOURCE: PCT Int. Appl.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| WO 2002030440 | A1 | 20020418 | WO 2001-JP8876 | 20011010 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| AU 2001094210 | A5 | 20020422 | AU 2001-94210 | 20011010 |

CA 2425361 A1 20030410 CA 2001-2425361 20011010
 EP 1331009 A1 20030730 EP 2001-974752 20011010
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
 US 2003180901 A1 20030925 US 2003-399061 20030410
 PRIORITY APPLN. INFO.: JP 2000-311034 A 20001011
 JP 2000-311035 A 20001011
 WO 2001-JP8876 W 20011010

AB Medicinal compositions for promoting recovery from stress loading which contain matsutake mushroom, optionally dried hot water-extract of matsutake mushroom, or optionally dried alkali solution-extract of matsutake mushroom together with pharmaceutically acceptable carriers; and a novel matsutake mushroom strain FERM BP-7304.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 28 OF 28 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1973:503657 HCAPLUS
 DOCUMENT NUMBER: 79:103657
 TITLE: Production of neutral protease by Basidiomycetes
 INVENTOR(S): Ueno, Saburo; Yoshikumi, Chikao; Matsunaga, Kenichi; Omura, Yoshio; Wada, Toshihiko
 PATENT ASSIGNEE(S): Kureha Chemical Industry Co., Ltd.
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| JP 48048682 | A | 19730710 | JP 1971-76240 | 19711001 |
| PRIORITY APPLN. INFO.: | | | JP 1971-76240 | A 19711001 |

AB Neutral proteases were produced by mushrooms (Tricholoma, Corticium, Clitocybe, etc.) cultured in liquid and solid media. A strain of Corticium was cultured in a medium containing peptone 0.5%, yeast extract 0.3%, KH₂PO₄ 0.03%, K₂HPO₄ 0.03%, MgSO₄·7H₂O 0.03%, glucose 3%, and other minerals at 25° for 20 days. Crude enzyme was obtained from the filtrate by (NH₄)₂SO₄ precipitation at 0.8 saturation. The proteases were stimulated by Mn²⁺ and L-ascorbic acid and inhibited by Hg²⁺. Optimum pH and temps. were 5-8 and 40-60°. The enzymes were inactivated at 65°.

L3 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:507549 HCAPLUS
 TITLE: Novel immune enhancing compositions
 INVENTOR(S): Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Kureha Chemical Industry Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 41 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| WO 2001049308 | A1 | 20010712 | WO 2000-JP9383 | 20001228 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2396239 | A1 | 20010712 | CA 2000-2396239 | 20001228 |
| AU 200124046 | A | 20010716 | AU 2001-24046 | 20001228 |
| EP 1256351 | A1 | 20021113 | EP 2000-987787 | 20001228 <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| US 2003044424 | A1 | 20030306 | US 2002-169779 | 20020703 |
| PRIORITY APPLN. INFO.: JP 2000-374 A 20000105 WO 2000-JP9383 W 20001228 | | | | |
| AB Novel immune enhancing compns. or functional foods, novel killer activity-inducing compns. or functional foods, novel tumor proliferation inhibitory compns. or functional foods, novel interleukin 12-inducing compns. or functional foods, novel TGF- β activity inhibitory compns. or functional foods and novel active oxygen-capturing compns. or functional foods each containing as the active ingredient hot water extract of Tricholoma matsutake or alkali-solution extract of Tricholoma matsutake, or a fraction of hot water extract of Tricholoma matsutake or alkali-solution extract of Tricholoma matsutake adsorbed by an anion exchange resin; and a novel fraction of Tricholoma matsutake or alkali-solution extract of Tricholoma matsutake adsorbed by an anion exchange resin. | | | | |

AN 2001:507549 HCAPLUS

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| PI WO 2001049308 | A1 | 20010712 | WO 2000-JP9383 | 20001228 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| JP 2000-374 A 20000105 CA 2396239 A1 20010712 CA 2000-2396239 20001228 JP 2000-374 A 20000105 WO 2000-JP9383 W 20001228 AU 200124046 A 20010716 AU 2001-24046 20001228 | | | | |

| | | | | | |
|--|----|----------|----------------|---|--------------|
| EP 1256351 | A1 | 20021113 | JP 2000-374 | A | 20000105 |
| | | | WO 2000-JP9383 | W | 20001228 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | EP 2000-987787 | | 20001228 <-- |
| IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | | |

| | | | | | |
|---------------|----|----------|----------------|---|----------|
| US 2003044424 | A1 | 20030306 | JP 2000-374 | A | 20000105 |
| | | | WO 2000-JP9383 | W | 20001228 |
| | | | US 2002-169779 | | 20020703 |
| | | | JP 2000-374 | A | 20000105 |
| | | | WO 2000-JP9383 | W | 20001228 |

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:288338 HCAPLUS
 TITLE: Medicinal compositions for promoting recovery from stress loading and novel matsutake mushroom strain
 INVENTOR(S): Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Kureha Chemical Industry Co., Ltd., Japan
 SOURCE: PCT Int. Appl.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|-----------------|--------------|
| WO 2002030440 | A1 | 20020418 | WO 2001-JP8876 | 20011010 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| AU 2001094210 | A5 | 20020422 | AU 2001-94210 | 20011010 |
| CA 2425361 | A1 | 20030410 | CA 2001-2425361 | 20011010 |
| EP 1331009 | A1 | 20030730 | EP 2001-974752 | 20011010 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | |
| US 2003180901 | A1 | 20030925 | US 2003-399061 | 20030410 <-- |
| PRIORITY APPLN. INFO.: | | | JP 2000-311034 | A 20001011 |
| | | | JP 2000-311035 | A 20001011 |
| | | | WO 2001-JP8876 | W 20011010 |

AB Medicinal compositions for promoting recovery from stress loading which contain matsutake mushroom, optionally dried hot water-extract of matsutake mushroom, or optionally dried alkali solution-extract of matsutake mushroom together with pharmaceutically acceptable carriers; and a novel matsutake mushroom strain FERM BP-7304.

AN 2002:288338 HCAPLUS

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------|--|----------|-----------------|------------|
| PI WO 2002030440 | A1 | 20020418 | WO 2001-JP8876 | 20011010 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| | | | JP 2000-311034 | A 20001011 |
| | | | JP 2000-311035 | A 20001011 |
| AU 2001094210 | A5 | 20020422 | AU 2001-94210 | 20011010 |
| | | | JP 2000-311034 | A 20001011 |
| | | | JP 2000-311035 | A 20001011 |
| | | | WO 2001-JP8876 | W 20011010 |
| CA 2425361 | A1 | 20030410 | CA 2001-2425361 | 20011010 |
| | | | JP 2000-311034 | A 20001011 |
| | | | JP 2000-311035 | A 20001011 |
| | | | WO 2001-JP8876 | W 20011010 |

10/505,468>25/09/2007

EP 1331009 A1 20030730 EP 2001-974752 20011010
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
JP 2000-311034 A 20001011
JP 2000-311035 A 20001011
WO 2001-JP8876 W 20011010
US 2003180901 A1 20030925 US 2003-399061 20030410 <--
JP 2000-311034 A 20001011
JP 2000-311035 A 20001011
WO 2001-JP8876 W 20011010
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:507549 HCAPLUS
 TITLE: Novel immune enhancing compositions
 INVENTOR(S): Matsunaga, Kenichi
 PATENT ASSIGNEE(S): Kureha Chemical Industry Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 41 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|-----------------|--------------|
| WO 2001049308 | A1 | 20010712 | WO 2000-JP9383 | 20001228 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| CA 2396239 | A1 | 20010712 | CA 2000-2396239 | 20001228 |
| AU 200124046 | A | 20010716 | AU 2001-24046 | 20001228 |
| EP 1256351 | A1 | 20021113 | EP 2000-987787 | 20001228 <-- |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | |
| US 2003044424 | A1 | 20030306 | US 2002-169779 | 20020703 |
| PRIORITY APPLN. INFO.: | | | JP 2000-374 | A 20000105 |
| | | | WO 2000-JP9383 | W 20001228 |

AB Novel immune enhancing compns. or functional foods, novel killer activity-inducing compns. or functional foods, novel tumor proliferation inhibitory compns. or functional foods, novel interleukin 12-inducing compns. or functional foods, novel TGF- β activity inhibitory compns. or functional foods and novel active oxygen-capturing compns. or functional foods each containing as the active ingredient hot water extract of Tricholoma matsutake or alkali-solution extract of Tricholoma matsutake, or a fraction of hot water extract of Tricholoma matsutake or alkali-solution extract of Tricholoma matsutake adsorbed by an anion exchange resin; and a novel fraction of Tricholoma matsutake or alkali-solution extract of Tricholoma matsutake adsorbed by an anion exchange resin.

AN 2001:507549 HCAPLUS

FAN.CNT 1

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| CA 2396239 | A1 | 20010712 | JP 2000-374 | A 20000105 |
| | | | CA 2000-2396239 | 20001228 |
| | | | JP 2000-374 | A 20000105 |
| | | | WO 2000-JP9383 | W 20001228 |
| AU 200124046 | A | 20010716 | AU 2001-24046 | 20001228 |

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|--|----|----------|----------------|---|--------------|
| EP 1256351 | A1 | 20021113 | JP 2000-374 | A | 20000105 |
| | | | WO 2000-JP9383 | W | 20001228 |
| | | | EP 2000-987787 | | 20001228 <-- |
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| IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | | |

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| | | | WO 2000-JP9383 | W | 20001228 |
| | | | US 2002-169779 | | 20020703 |
| | | | JP 2000-374 | A | 20000105 |
| | | | WO 2000-JP9383 | W | 20001228 |

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